



Year: 2020

Origin and Health Status of First-Generation Africans from Early Colonial Mexico

Barquera, Rodrigo ; Lamnidis, Thiseas C ; Lankapalli, Aditya Kumar ; Kocher, Arthur ; Hernández-Zaragoza, Diana I ; Nelson, Elizabeth A ; Zamora-Herrera, Adriana C ; Ramallo, Patxi ; Bernal-Felipe, Natalia ; Immel, Alexander ; Bos, Kirsten ; Acuña-Alonzo, Víctor ; Barbieri, Chiara ; Roberts, Patrick ; Herbig, Alexander ; Kühnert, Denise ; Márquez-Morfin, Lourdes ; Krause, Johannes

Abstract: The forced relocation of several thousand Africans during Mexico's historic period has so far been documented mostly through archival sources, which provide only sparse detail on their origins and lived experience. Here, we employ a bioarchaeological approach to explore the life history of three 16th century Africans from a mass burial at the San José de los Naturales Royal Hospital in Mexico City. Our approach draws together ancient genomic data, osteological analysis, strontium isotope data from tooth enamel, ^{13}C and ^{15}N isotope data from dentine, and ethnohistorical information to reveal unprecedented detail on their origins and health. Analyses of skeletal features, radiogenic isotopes, and genetic data from uniparental, genome-wide, and human leukocyte antigen (HLA) markers are consistent with a Sub-Saharan African origin for all three individuals. Complete genomes of *Treponema pallidum* sub. pertenue (causative agent of yaws) and hepatitis B virus (HBV) recovered from these individuals provide insight into their health as related to infectious disease. Phylogenetic analysis of both pathogens reveals their close relationship to strains circulating in current West African populations, lending support to their origins in this region. The further relationship between the treponemal genome retrieved and a treponemal genome previously typed in an individual from Colonial Mexico highlights the role of the transatlantic slave trade in the introduction and dissemination of pathogens into the New World. Putting together all lines of evidence, we were able to create a biological portrait of three individuals whose life stories have long been silenced by disreputable historical events.

DOI: <https://doi.org/10.1016/j.cub.2020.04.002>

Posted at the Zurich Open Repository and Archive, University of Zurich

ZORA URL: <https://doi.org/10.5167/uzh-187483>

Journal Article

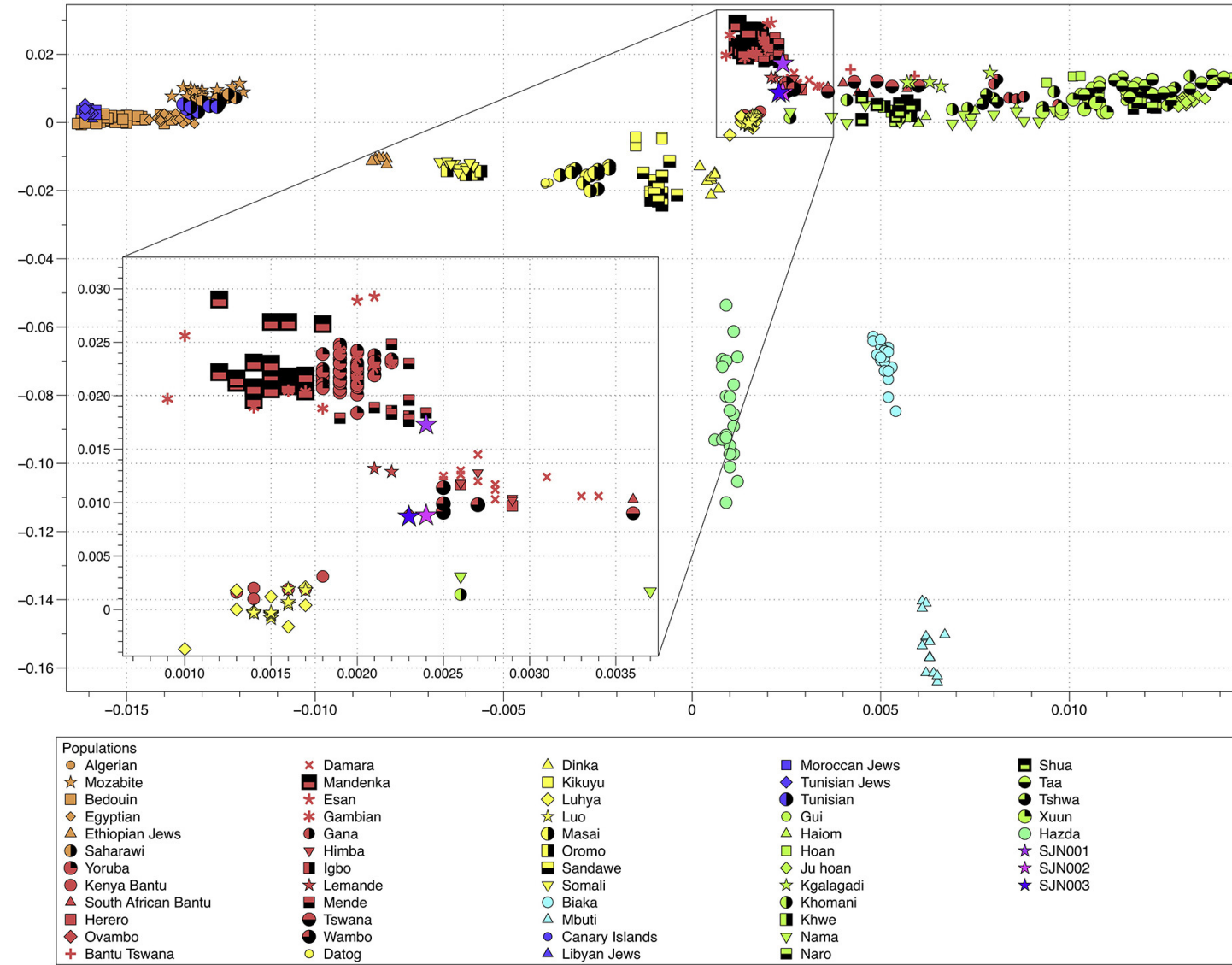
Accepted Version

Originally published at:

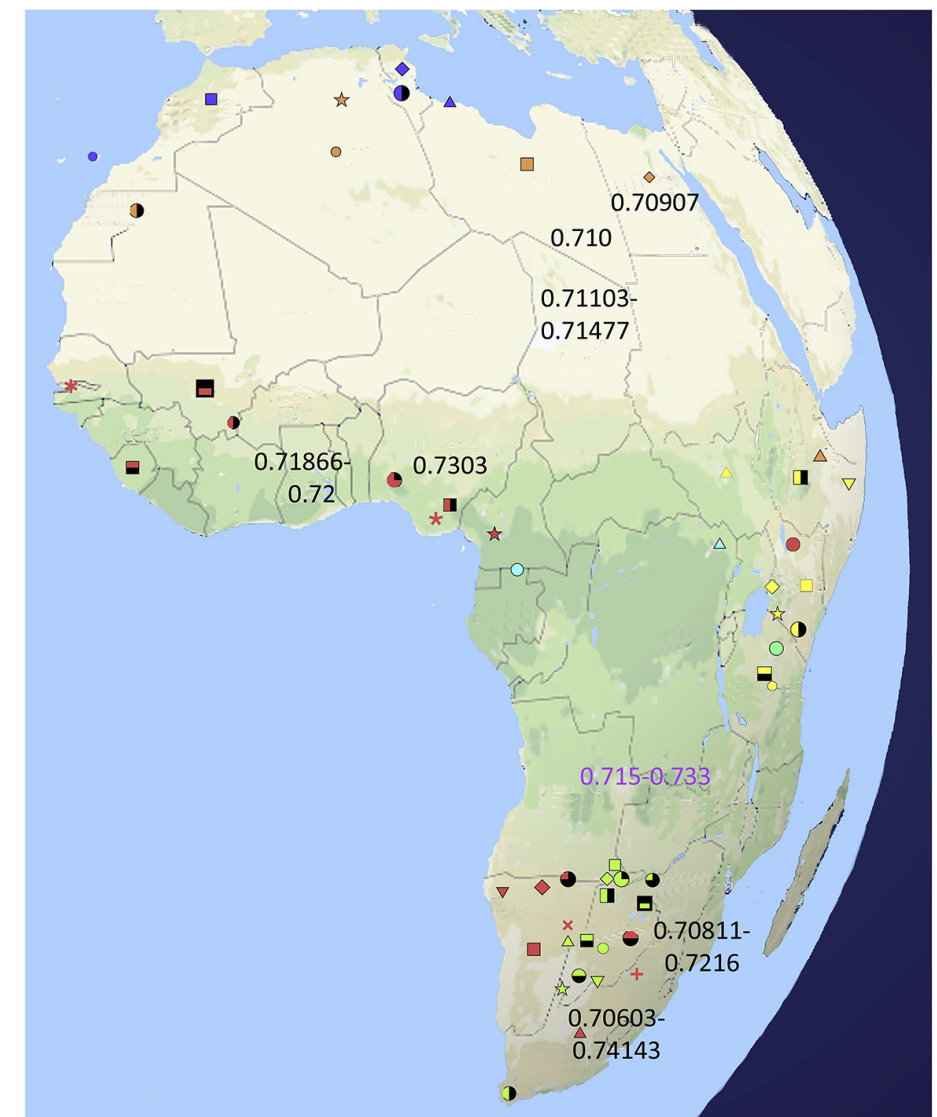
Barquera, Rodrigo; Lamnidis, Thiseas C; Lankapalli, Aditya Kumar; Kocher, Arthur; Hernández-Zaragoza, Diana I; Nelson, Elizabeth A; Zamora-Herrera, Adriana C; Ramallo, Patxi; Bernal-Felipe, Natalia; Immel, Alexander; Bos, Kirsten; Acuña-Alonzo, Víctor; Barbieri, Chiara; Roberts, Patrick; Herbig, Alexander; Kühnert, Denise; Márquez-Morfin, Lourdes; Krause, Johannes (2020). Origin and Health Status of First-Generation Africans from Early Colonial Mexico. *Current Biology*, 30(11):2078-2091.e11.

DOI: <https://doi.org/10.1016/j.cub.2020.04.002>

A



B



C

